2004 International Meeting
on Reduced Enrichment for Research and Test Reactors (RERTR)
Vienna, Austria
8 November 2004

DOE/NNSA Introduction

Good morning and thank you for having me here today.

It's a pleasure to welcome you all to this year's International RERTR Meeting.

I know very well how much effort goes into arranging a conference of this scope, and I congratulate all the organizers for their hard work.

I'm pleased to see here so many scientists from so many countries. Heaven knows there are enough meetings of policymakers in the capitals of the world, so it's nice to briefly join a group that can actually solve the technical issues associated with the policy problem at hand.

The evolving threat of international terrorism and nuclear proliferation has manifested itself in a very compelling way in recent years; the tasks before us are unspeakably serious and some are technically complex. That's why it's so important that experts such as you continue to work together to minimize and eventually eliminate the use of HEU in civil nuclear applications, throughout the world, and as soon as possible.

As you already well know, the most common civil use of HEU is in research and test reactors, either as fuel or targets. About 150 such reactors currently use HEU fuels. Research reactors

and the use of uranium as targets in reactors play indispensable roles in the production of medical radioisotopes, radiation therapy, nuclear training, material testing, and scientific research. However, in nearly all cases, these missions can be accomplished without significant penalties using low enriched uranium fuels and targets, which would avoid the proliferation risk associated with HEU. To date, the RERTR program has made possible the partial or full conversion to LEU fuel of 39 reactors in 22 countries – reducing civil commerce in HEU by about 4 metric tons, sufficient material to manufacture over 100 nuclear weapons. In addition, since the start of the RERTR program in 1978, 21 research reactors in 16 countries have been built using an LEU fuel. This trend indicates that we are having an effect, that we are changing the way people think about research reactors. The focus for new construction is almost exclusively on LEU designs using fuels developed by the RERTR program.

This has been a very interesting year for the RERTR program in terms of milestones and, regrettably, setbacks. As many of you know, we experienced some serious fuel performance problems with the uranium-molybdenum dispersion fuel this year. On a more positive note, however, we had a major nonproliferation breakthrough with Libya and are now cooperating with Libyan experts to convert their research reactor and critical assembly to LEU fuel.

So while we have made progress, we still have a large task before us, both to eliminate the use of HEU in current and future research reactors, and to secure fresh and spent HEU fuel where it still exists. As the global proliferation threat continues to evolve and terrorists continue to pursue WMD capabilities, technologies, and expertise, we need a more comprehensive and directly focused effort to respond to these threats. As a result, in May of this year here in Vienna, Energy

Secretary Abraham launched a new effort – the Global Threat Reduction Initiative, or GTRI, whose purpose is to consolidate and focus our efforts under common management to pursue these two main and complementary objectives.

The RERTR program is a central element of the GTRI for nuclear threat reduction. Under the newly-established GTRI, the U.S. Department of Energy has consolidated the three key programs – RERTR, the U.S. Foreign Research Reactor Spent Nuclear Fuel (FRR SNF) Acceptance Program and the Russian Research Reactor Fuel Return (RRRFR) Program – which work in concert to bring about the elimination of HEU as a source of proliferation concern at research reactors and radioisotope production facilities around the world. The RERTR program relies on the fuel return programs to provide much needed incentives for conversion of research reactors overseas and to help countries deal with the back end of the fuel cycle, while the fuel repatriation efforts depend on the RERTR program to create the technical basis for world community of LEU-fueled research reactors. To effectively leverage these incentives, maximize resources, and enable the development of an integrated strategy, we have consolidated these programs within GTRI to help accelerate the U.S. HEU minimization policy.

Energy Secretary Abraham also announced that we will accelerate the conversion of the remaining 66 civilian research reactors targeted by the RERTR. The Secretary has committed to convert about half of these reactors, for which LEU fuel is currently commercially available, over the next three to five years. In addition, we have enhanced our efforts, both domestic and international, to focus attention and resources on the development of high density fuels to enable conversion of the remaining reactors for which LEU fuel is <u>not</u> currently available. Also, we

will be convening at the end of this week the first international workshop for those involved in the research of these potential new fuels.

In addition, we haven't lost sight of the fact that the United States has a responsibility to convert its own domestic research reactors. To this end, eleven U.S. civilian research reactors have already been converted from the use of HEU to LEU fuel. Moreover, we have committed to complete the conversion of our remaining domestic civilian research reactors by 2013. We will also continue to press the large commercial medical isotope producers to convert to an LEU production process.

The GTRI is also accelerating the fuel repatriation programs. With regard to the Foreign Research Reactor Spent Nuclear Fuel program, Secretary Abraham has instructed the appropriate offices within the Department to undertake the actions necessary to extend the deadline of the original program. The extension of this deadline will allow us to complete our work to return this U.S.-origin research reactor spent nuclear fuel. A final agency decision with respect to the extension of the Acceptance program will become effective upon completion of the requisite environmental review and publication of a Record of Decision, in accordance with the Department's National Environmental Policy Act regulations. My colleague from the Department of Energy, Mr. Chuck Messick, will present more information on this topic later this morning.

We will continue to work closely with our colleagues in the Russian Federation and the International Atomic Energy Agency under the Russian Research Reactor Fuel Return program

to accelerate repatriation of all fresh and spent Russian-origin nuclear fuel currently residing at research reactors around the world. As part of our acceleration efforts, all Russian-origin fresh HEU fuel will be returned to Russia by the end of 2005 and all Russian-origin spent nuclear fuel will be repatriated to Russia by 2010. Thus far, our joint efforts have resulted in the return to Russia of almost 100 kilograms of fresh HEU from Serbia, Romania, Bulgaria, Libya, and Uzbekistan. And, we are planning the pilot shipment of spent HEU fuel from Uzbekistan for early 2005.

These countries were among one hundred participants in the recent Global Threat Reduction Initiative International Partner's Conference that took place here in Vienna on September 18th and 19th. The conference was co-sponsored by the United States and the Russian Federation, and supported by the IAEA. Nearly 600 representatives from 100 IAEA Member States attended the conference, whose purpose was to build international support for national efforts to secure and disposition high-risk nuclear and other radioactive materials that pose a threat to the international community. The conference was an overwhelming success and many participants expressed an interest in cooperating in various elements of the GTRI. We hope to maintain the momentum from that conference as we work together with the international community to combat the threat of nuclear and radiological terrorism.

In conclusion, it is my sincere hope that you will have a personally and professionally-rewarding time in Vienna this week as you work on the technical issues of the RERTR program. This Meeting is the international forum for presenting the premier research in this field, and every

year your efforts generate ever greater participation. The success of the RERTR program depends on the spirit of international collaboration that brings us together today.

I'm authorized to assure you that the U.S. Department of Energy fully supports the RERTR program and will continue to support it. Like you, I look forward to the time when weapons-grade uranium is no longer needed for civilian purposes and is therefore no longer in circulation anywhere in the world.

I wish you the best of luck and good fortune in your discussions over the course of this week, and I appreciate the opportunity to be with you as you begin your consultations.